

What Is Claimed Is:

1. A liquid composition for promoting plant growth, which contains titanium dioxide nanoparticles.

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2. A liquid composition for promoting plant growth, which contains titanium dioxide nanoparticles, in which the composition contains, as a main component, an aqueous solution containing titanium dioxide colloids; the titanium
10 dioxide nanoparticles have such a particle size that they can be readily absorbed to plants; a pH of the aqueous solution is adjusted in order to prevent rapid precipitation of the titanium dioxide nanoparticles in the aqueous solution, before the aqueous solution is diluted
15 with water such that titanium dioxide has a desired concentration; and the composition contains adjuvants necessary for plant growth and a surfactant for dispersion.

3. The composition of Claim 2, in which the titanium
20 dioxide nanoparticles have a particle size ranging from 3 to 200 nm.

4. The composition of Claim 2, in which the titanium
dioxide colloids has a crystal structure selected from the
25 group consisting of anatase, rutile, brookite and a mixture thereof.

5. The composition of Claim 2, in which a pH of the

aqueous solution is adjusted with organic or inorganic acids.

6. The composition of Claim 2, in which the aqueous
5 solution is diluted with water such that a titanium dioxide concentration is in the range of 1 to 1,000 ppm.

7. The composition of Claim 1, in which the surfactant for dispersion is selected from the group consisting of a
10 cationic surfactant, a nonionic surfactant, an anionic surfactant, an amphoteric surfactant, and a mixture of two or more thereof, which are used at the amount of 0.1 to 5% by weight relative to the titanium dioxide solids.

15 8. The composition of Claim 1, in which the adjuvants necessary for plant growth are in the form of a water soluble salt of one or more element selected from the group consisting of N, P, K, S, Ca, Mg, Fe, Cu, Zn, Mo, Mn and B, which are used at the amount of 0.1 to 20% by weight
20 relative to the titanium dioxide solids.

9. The composition of Claim 2, in which the adjuvants necessary for plant growth are silver (Ag) nanoparticles which are used at the amount of 0.5 to 20% by weight
25 relative to the titanium dioxide solids.

10. The composition of Claim 2, in which the adjuvants necessary for plant growth are one or more selected from

the group consisting of Li, Be, B, Na, Mg, Al, Si, P, K, Ca, Sr, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, Se and Zr, which are used at the amount of 0.1 to 20% by weight relative to the titanium dioxide solids.